

paperback in addition to the first edition, and the extent of revision also warrants a fresh review.

The strengths of the earlier edition are retained. Smith provides comprehensive coverage and sources; he has a clear writing style and he gives excellent case studies. He makes little attempt to integrate the different conceptual frameworks, but has an enviable skill in reviewing often contradictory studies with sensitivity and accuracy.

Those with courses organized along the lines of the first edition will welcome the second edition, as it will not disrupt that organization while introducing valuable new material. My only question, and it is a large one, is whether it is still possible to encompass the field of environmental hazards in an introductory text of this kind. The field of environmental hazards (as apposed to geophysical hazards) is changing very rapidly. I am aware of 10 texts that have appeared since 1991 and at least 20 relevant new journals which have appeared since 1976. As far as the field of environmental hazards is concerned, the areas of risk analysis, risk perception, risk communication and risk management have crystallized as essential components of the field, and technological hazards have become a dominant concern. It is not until the last section of the last chapter that there is an explicit discussion of the question that lies behind the whole of the volume – how do we make decisions under conditions of uncertainty? Geophysical hazards, which are well discussed by Smith, present us with one broad category of uncertainty, namely the uncertainty of naturally occurring events as modified by their interaction with society. Biophysical and technological hazards, which are relatively superficially discussed by Smith, present us with the additional uncertainties of ecosystem functioning and societal decision-making. The balance of material in an introductory text now perhaps needs to shift so that geophysical, biophysical and technological hazards occupy similar space.

Although geomorphologists might find this unhelpful, it would perhaps be a fairer reflection of the state of environmental hazard research. More importantly, the level of interest among technologically advanced societies is apparently substantially greater in biophysical and technological hazards than in geophysical ones (Cutter, 1993). From the perspective of a geomorphologist, the

substantially increased attention paid to mass movements is a welcome change, but erosion and land subsidence hazards associated with wind, and surface and subsurface water action, are generally neglected. Furthermore, in most chapters there is now a more solid discussion of event and vulnerability modifications which frequently show-case the distinctive contributions of applied geomorphologists.

Perhaps the least satisfactory aspect of the book is the author's unwillingness to commit himself to a specific definition: 'the term "environmental hazards" defies precise definition' (p. xvii); 'the definition of environmental hazards is difficult' (p. 8); 'there is no general agreement on a definition of disaster' (p. 27); 'the term biophysical hazards covers a wide spectrum of environmental risk' (p. 237); 'drought is different from other environmental hazards' (p. 286); and 'It is difficult to provide a definition of technological hazards which suits all tastes' (p. 314). Also, his grouping of physiological, frost and wildfire hazards with epidemics in the 'biophysical hazards' chapter succeeds in doing justice to none of these important areas. AIDS and wildfire may indeed have some superficial resemblance in terms of the speed of diffusion, but they have little else in common. In spite of these concerns, my evaluation is that this remains one of the best introductory texts on hazards. The reader is given a comprehensive introduction to a variety of conceptual frameworks and the profound physical and societal problems associated with hazard, risk and disaster studies.

References

- Alexander, D. 1993. 'Review of Bryant, EA, 1991: Natural Hazards and Smith, K, 1992: Environmental Hazards: Assessing Risk and Reducing Disaster', *Progress in Physical Geography*, **17**, 504–506.
- Cutter, S. L. 1993. *Living with Risk: The Geography of Technological Hazards*, Arnold, London and New York.

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GEOMORPHOLOGY IN THE TROPICS – A STUDY OF WEATHERING AND DENUDATION IN LOW LATITUDES by Michael F. Thomas, John Wiley & Sons Ltd, Chichester, 1994. No. of pages: xix+460. Price: £75.00. ISBN 0471930350.

This book makes a valuable contribution to a somewhat neglected area of study, namely geomorphology in the tropics (particularly the humid tropics). It begins with processes and products of weathering, the development of weathering profiles and saprolite, laterites, bauxites and other surficial materials. Review of denudational processes is followed by the evidence for, and the effects of, Quaternary environmental change. Finally, models of long-term landform evolution are addressed. In addition to providing

for academic geomorphologists, the author clearly also has other interest groups in mind. He argues that 'the formational processes and histories of landscapes in the tropics merit thorough enquiry, for the insights which can be obtained into problems of land resources and environmental hazards of concern to the peoples of tropical areas'. Engineers, geochemists, soil scientists, geologists, hydrogeologists, hydrologists and other environmental scientists will find much of value here.

The coverage of the literature, often extricated from rather obscure places, is more than impressive. Thomas carefully takes the reader through changing concepts, from pioneer to more modern works, a journey saved from being a minefield by his systematic provision of the basis for the various views. By providing the reasons for contradictory opinions, he leaves the reader with a firm grasp of the state of play on a

remarkably wide range of issues, clearly indicating the gaps and the routes forward. The treatment of the works of others is immensely fair; even the more outrageously dissenting voices are given serious, systematic consideration.

This book is beautifully presented and nearly impossible to fault. (The discovery of an upside-down plate almost came as a relief.) Although the immense care evident in this production places almost impossibly complex and variously interconnected issues within a manageable framework, nevertheless this is no book for the uninitiated. For the seasoned addict, the volume provides a remarkably good route into the many issues which tend to be just beyond an individual's range of expertise. In the short time I have had it, I have already dipped in many times in search of authoritative

updates on various issues and I have found them without difficulty. The author has done us a considerable service and it is particularly pleasing to see the increased weight given to subsurface processes and biochemistry, as compared with more traditional geomorphological texts, where these less easily accessed but very important areas have tended to receive short shrift. This book is a feast, which will not be bettered for a long time, but eat slowly and chew well for maximum effect.

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